APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/645,970	08/24/2000	Thomas A. Cain	5019.7	4449

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MUNSCH, HARDT, KOPF & HARR, P.C.
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1445 ROSS AVENUE, SUITE 4000
DALLAS, TX 75202-2790

EXAMINER
HARRY, ANDREW T

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/645,970	CAIN ET AL.
	Examiner	Art Unit
	Andrew T Harry	2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5)☐ Notice of Informal Patent Application (PTO-152)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6)☐ Other: .

DETAILED ACTION

Claims 1-7, 9-17, 19-26, and 28-29 are rejected under 35 USC § 102

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9-17, 19-26, and 28-29 are rejected under 35 U.S.C. 102(e) as being

anticipated by *Sharma et al.* **U.S. Patent 6,069,871**.

As pertaining to **claims 1, 11, and 21,** *Sharma* teaches an apparatus and method for

dynamically balancing call processing tasks among a plurality of call processing nodes in a

telecommunications switch (see *Sharma*, abstract), comprising:

a plurality of call processing nodes (see *Sharma*, Fig. 1);

at least one incoming call receiving node (see *Sharma*, col. 4 line 64-col. 5 line 16);

the plurality of call processing nodes each:

periodically updating a node occupancy value at each of the plurality of call processing

nodes (see *Sharma*, col. 7 lines 12-13);

communicating the respective node occupancy value of each call processing node to at

least one work originator node operable to receive incoming calls (see *Sharma*, col. 7 lines 12-

15);

the at least one incoming call receiving node;

storing the node occupancy values of the plurality of call processing nodes at the at least

one work originator node (see *Sharma*, col. 7 lines 16-20);

selecting, by the at least one work originator node, a call processing node to process the

incoming call in response to the node occupancy values of the call processing nodes (see

Sharma, col. 7 lines 35-53).

As pertaining to **claims 2, 12, and 22**, in *Sharma's* method and apparatus the node

occupancy value is periodically updated by calculating the node occupancy value, by each of the

plurality of call processing nodes, using a percentage of available processing capacity of the call

processing node (see *Sharma*, col. 7 line 66-col.8 line 63).

As pertaining to **claims 3, 13, and 23**, in *Sharma's* method and apparatus the node

occupancy value is periodically updated by calculating the node occupancy value, by each of the

plurality of call processing nodes, using a combination of a percentage of available processing

capacity of the call processing of the call processing node and a length of its work queue (see

Sharma, col. 7 line 66-col.8 line 63).

As pertaining to **claims 4 and 14**, in *Sharma's* method and apparatus the node occupancy

value is periodically updated by calculating the node occupancy value, by each of the plurality of

call processing nodes, using a combination of a percentage of available processing capacity of

the call processing of the call processing node, length of its work queue, and processing speed

(see *Sharma*, col. 7 line 66-col.8 line 63, it is clear that many of the parameters used in *Sharma's*

disclosure are used to reflect the processing capabilities of the node).

As pertaining to **claims 5, 15, and 24**, in *Sharma's* method and apparatus communicating

the respective node occupancy value comprises:

inserting the respective node occupancy value into a message header of a call processing

message; and

sending the message to the work originator node (see *Sharma*, col. 7 lines 45-53, and col.

8 lines 60-63, *Sharma* clearly shows that the call processing protocol allows the Net Excess

Capacity (NEC) to be passed in a protocol message).

As pertaining to **claims 6, 16, and 25**, in *Sharma's* method and apparatus communicating

the respective node occupancy value comprises sending a call processing message containing the

respective node occupancy value as part of existing call processing message traffic (see *Sharma*,

col. 7 lines 45-53, and col. 8 lines 60-63, *Sharma* indicates that this exchange takes place as a

normal occurrence, thus being "existing" traffic).

As pertaining to **claims 7, 17, and 26**, in *Sharma's* method and apparatus communicating

the respective node occupancy value comprises:

inserting the respective node occupancy value and a sender ID into a message header of a

call processing message; and

sending the message to the work originator node (see *Sharma*, col. 7 lines 35-53, and col.

8 lines 60-63, *Sharma* clearly shows that the call processing protocol allows the Net Excess

Capacity (NEC) to be passed in a protocol message and an ID is contained in that message).

As pertaining to **claims 9-10, 19-20, and 28-29**, selecting a call processing node in

Sharma's method and apparatus comprises:

determining a subset of call processing nodes having lowest node or third node

occupancy values; and

randomly selecting a call processing node from the subset node (see *Sharma*, col. 9 line

39-col. 10 line 27, *Sharma* clearly shows that the nodes with the greatest amount of free

occupancy are selected and if two nodes have the same values it's clear that one of the two or

three with the lowest occupancy values would be randomly selected).

Claims 8, 18, and 27 are rejected under 35 USC § 103

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 8, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sharma.

As pertaining to **claims 8, 18 and 27**, *Sharma's* method and apparatus does not explicitly

state that the storing of the node occupancy of the plurality of call processing nodes comprises

storing the node occupancy value in a table indexable by the sender ID. However *Sharma's*

disclosure does indicate that the node occupancy value is stored for each node and that it is

somehow tied to the ID so that in the process of selecting the appropriate node to use includes

the node occupancy value and some identification for each node (see *Sharma*, col. 10 lines 1-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to know

that, even though it is not explicitly disclosed by *Sharma*, that the storing of the node occupancy

of the plurality of call processing nodes comprises storing the node occupancy value in a table

indexable by the sender ID. This would have been an obvious way for *Sharma* to store the node

occupancy value and to index that value to the identification of the particular nodes from which

it could select.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

B. Maveddat et al. U.S. Patent 6,129,604 teaches dynamic load distribution in a wireless

communication system to equalize loading on mobile switching centers.

C. Raghavan et al. U.S. Patent 6,128,500 teaches a method and system for optimizing

capacity of a CDMA cellular communication system.

D. Yuan et al. U.S. Patent 6,055,433 teaches a data processing system and method for

balancing a load in a communications network.

E. Neumiller et al. U.S. Patent 6,141,559 teaches a method and apparatus for performing

selection and distribution in a communications system.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrew T Harry whose telephone number is 703-305-4749. The

examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-872-9314 for regular

communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-4700.

ATH

February 10, 2003